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Photomonitoring Protocol for the Upper Columbia Basin Network

Standard Operating Procedure (SOP) #6

Field Procedures

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Note: This SOP describes the step-by-step procedures for collecting and recording photomonitoring data in the field for purposes of long-term monitoring of vegetation cover and demography, stream bank morphology, and for evaluating general landscape change.

Required reading:

Hall, F.C. 2002. Photo point monitoring handbook. U.S. Forest Service General
    Technical Report PNW-GTR-526. Parts A and B. 134 p.

Procedures:

1. Prior to entry into the field, review the site locator fieldbook and ensure that all sampling locations are updated with accurate directions, locations, and photograph copies. Make sure all photographic equipment and GPS units are functioning properly and have fully charged batteries.

2. Review the objectives of the specific photomonitoring application, determine which type of photopoints will be required (landscape or topic) and the season and optimal time of day.

3. In the field, locate witness sites and navigate to the photopoint or camera station. For topical photographs, place the meter board directly on the photopoint location as marked. Double check the distance between the camera station and the meter board, as this is the most crucial parameter to duplicate precisely in successive photos.

4. Determine the bearing (azimuth) from the camera station to the meter board with a compass.

5. Obtain all necessary UTM and other location and direction information and record in the appropriate data form.

6. Place the photo identification card on the support pole into the ground in the foreground of the camera view. Make sure it does not interfere with the field-of-view and photo subject. Ensure that date, plot, camera station, and photopoint identification information are correct.

7. Set up the tripod at the camera station, adjusting for the proper camera height. Make sure the film camera ISO setting is adjusted to the film that is loaded in the camera. Carefully establish the shutter speed and f-stop for the current lighting conditions. Establish equivalent information for the digital camera and record.

8.   Collect photographs from both the film camera and digital camera at each camera station for each photopoint.

9.   Collect all remaining ancillary data, including information on vegetation and site characteristics.

10.   Before leaving the site, be sure that all permanent markers are in place and secure. Update witness site information and photographs if site changes have made earlier information inaccurate. Ensure that aluminum tags with camera station and photopoint identification numbers are securely attached to markers.

Data Collection Fields: The following fields are required for every photopoint. They will be developed into digital data forms during pilot work planned for 2005 and 2006.

Site Description:

- Photopoint, camera station, and witness site UTM (NAD 83), PLS Legal Description, and detailed directions
- Associated plot identification number (if present; i.e. a point count station or vegetation plot)
- Camera station ID number (alphanumeric)
- Photopoint # (numeric)
- Date and time of photograph
- Site description, including topic or photograph objective
- Slope
- Aspect
- Elevation
- Vegetation description (following forthcoming protocol)

Photograph Information:

- Camera station distance to photopoint (meter board)
- Bearing (azimuth) from camera station to meter board
- Camera height
- Camera focal length
- Shutter speed
- F-stop
- Film brand
- Film type (slide, print)
- Film ISO speed
- Camera make and model
- Camera format
- Digital resolution (megapixels)